

42390P9222

PATENT

REMARKS

Applicant respectfully presents Claims 1, 2, 4, 5, 8-12, 14, 15, 18-22 and 24-29 for examination in the RCE filed herewith. Claims 3 and 13 were previously canceled, Claims 1, 5, 8, 9, 10, 11, 15, 18, 19, 20, 21, 24 and 27 are amended and new Claims 28 and 29 are submitted herein. The new claims do not add any new subject matter and are completely supported by the originally filed specification. Applicant respectfully submits that the claims and remarks presented herein overcome the Examiner's rejections in the Final Office Action dated November 3, 2004 in the parent application.

35 U.S.C. § 102

Claims 1-2, 4-12 and 14-27 stand rejected under 35 U.S.C. § 102 as anticipated by Arai, et al., U.S. Patent No. 6,496,893 (hereafter "Arai"). The Examiner submits that Arai teaches all the elements of independent Claims 1, 11 and 21. Claims 6, 7, 16, 17 and 23 have been canceled herein without prejudice and the rejections to those claims are hereby moot. With respect to the remaining claims, Applicant respectfully traverses the Examiner's rejection.

Applicant respectfully submits that the Examiner misunderstood the "virtual device object" as used in the claims herein. The virtual device object, as described in the specification (e.g., P 4, lines 7-17) refers to a "placeholder" or an emulated version of the parent driver. By adding this placeholder to the bottom of the stack, the virtual device object may receive remove requests and pass the request on to the parent device (bypassing the child devices), to inform the parent device to stop using the child devices. Thereafter, the virtual device object may pass the remove query up the stack, i.e., to the child driver. Since the parent driver has released the services of the child driver, the child driver will be able to approve the remove query. The virtual device object claimed herein is thus not comparable to the virtual device driver (VxD) described in Arai. It is well known in the art that VxDs are device drivers provided by Microsoft Windows that support plug and play capabilities (See also, Arai, Col. 3, lines 13-17). The virtual device object claimed herein, on the other hand, is merely an emulation of the parent driver and may be used to essentially bypass the child drivers, tell the parent driver to stop using the child driver's services, then pass the remove query on to the child driver(s) (See

42390P9222

PATENT

Specification, Page 4). Unlike prior art systems wherein the remove query is typically sent directly to the child driver (which fails if the parent driver is utilizing the services of the child driver) (See Specification, Background), embodiments of the invention claimed herein enable the parent to stop using the services of the child driver before the child driver receives the remove query.

Arai does not disclose this type of a scheme. More specifically, Arai does not disclose the claimed elements, namely creating a virtual device object representing a parent device; binding the virtual device object to the parent device, inserting the virtual device object in the driver stack below a child device, accessing a service of the child device by the parent device with a request from the virtual device object on behalf of the parent device, receiving at the virtual device object a remove query to remove the driver stack, sending the remove query from the virtual device object to the parent device, releasing by the parent device the service of the child device, approving the remove query, passing the remove query from the virtual device object to the child device immediately above the virtual device object in the driver stack and completing the remove query by removing the driver stack. Thus, for example, although Arai, Col., 15, talks about removing a device node (device stack) from a devnode tree, it does not disclose the claimed details of how to remove the device stack. Instead, this section of Arai merely describes the prior art scheme of removing a device stack, as described in the Background section of the Specification (See Page 2-3). This scheme does not address the problem that the present invention solves, namely the problem of shutting down the device stack *when the parent device is using the services of a child device*. It is well known to those of ordinary skill in the art that an attempt to shutdown a device stack under these circumstances will fail (See Specification, Page 2, lines 30-34). By placing a placeholder (virtual device object) below the child device, receiving the remove query and allowing the parent device to stop using the child device's services (i.e., by passing the remove query to the child device only *after* the parent device has released the service of the child device), the claimed invention overcomes the limitations of the prior art.

Applicant therefore respectfully submits that since Arai does not disclose the elements of Claims 1, 11 and 21, Arai does not anticipate these claims. Additionally, since Claims 2, 4, 5, 8-10 and 28 are dependant on Claim 1, Claims 12, 14, 15, 18-20 and

42390P9222**PATENT**

29 are dependant on Claim 11 and Claims 22 and 24-27 are dependant on Claim 21, Arai also does not anticipate these dependant claims. Applicant therefore respectfully requests the Examiner to withdraw the 35 U.S.C. § 102 rejections to pending Claims 1-2, 4-12 and 14-27.

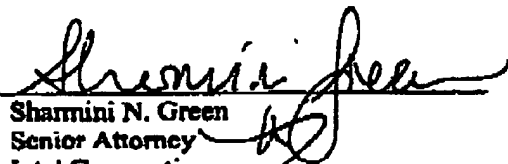
42390P9222

PATENT

CONCLUSION

Based on the foregoing, Applicant respectfully submits that the applicable objections and rejections have been overcome and that Claims 1, 2, 4, 5, 8-12, 14, 15, 18-22 and 24-29 are in condition for allowance. Applicant therefore respectfully requests an early issuance of a Notice of Allowance in this case. If the Examiner has any remaining questions, he is encouraged to contact the undersigned at (310) 406-2362.

Respectfully submitted,

Dated: February 3, 2005
Sharmini N. Green
Senior Attorney
Intel Corporation
Registration No. 41,410
(310) 406-2362